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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,762	06/26/2003	Toshiyuki Kawaguchi	2003_0407A	4491
513	7590	07/28/2004	EXAMINER	
WENDEROTH, LIND & PONACK, L.L.P. 2033 K STREET N. W. SUITE 800 WASHINGTON, DC 20006-1021			FISHMAN, MARINA	
			ART UNIT	PAPER NUMBER
			2832	

DATE MAILED: 07/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/603,762

Applicant(s)

KAWAGUCHI ET AL.

Examiner

Marina Fishman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

General status

1. This is a Final Action on the Merits. Claims 1 – 18 are canceled, new claims 19 - 45 are pending in the case and are being examined.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 19, 22, 29, 32, 33, 36, 43 and 45 are rejected under 35

U.S.C. 102(b) as being anticipated by Tanabe [US 5,871,088].

Tanabe discloses a push-button switch member comprising:

- a key-top portion for pressing a movable contact point [9,9a] which is disposed against a stationary contact point [11] on a circuit board [10] so as to oppose the stationary contact point [Figure 2];
- a cover base member [8] provided with the key-top portion at a predetermined portion of the key-top portion and adapted to be mounted to the circuit board;
- an area emitter member integrally formed with the display section, wherein the area emitter member is

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provided with an light emitting layer [5], disposed between a based electrode [7] and a transparent electrode [4] that is arranged to be contacted to the display section and formed of a transparent conductive polymer [polyethylene; Column 2, lines 44 – 58 (it is well known that polyethylene is specie of polythiophene)].

Regarding claims 22 and 36 Tanabe discloses a push-button switch with the transparent electrode that is being colored [Column 6, lines 44 – 48].

Regarding claims 32 and 45, Tanabe discloses a push-button switch with a plurality of switch circuits composed of a plurality of the key-top portions and a plurality of the base electrodes and a plurality of the transparent electrodes corresponding to the plurality of key-top portions, respectively, are integrally formed to said cover base member [Figures 3, 7, 8].

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 20, 21, 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanabe [US 5,871,088].

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Regarding Claims 20, 21, 34 and 35, Tanabe discloses the transparent electrode with conductive and transparent characteristics that can be improved by dispersing conductive powders in a insulating resin [4, Column 4, lines 1 –16], however does not discloses specific resistance and light transmittance of the electrode. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the transparent electrode with a surface resistance of not less than $10\Omega/\square$ and light transmittance of not more than 90%, since it has been held to be within the general skill of a worker in the art to select well known material on the basis of its suitability for the intended use as matter of obvious design choice. [In re Leshin, 125 USPQ 416].

5. Claims 23 - 28, 30, 31, 37 – 42 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanabe [US 5,871,088] in view of Lemarchand et al. [EP 0,981,144] (for the purpose of translation equivalent US 6,416,196 has been used).

Regarding Claims 23, 24, 37, 38 and 39, Tanabe discloses instant claimed invention except for elongated conductive members connected to the base and transparent electrodes are covered with elongatable insulating film and not overlapped with each other. Lemarchand et al. disclose the push-button switch member having elongated conductive members connected to the base and transparent electrodes are covered with elongatable insulating film and not overlapped with each other [Figure 1]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have elongated conductive members connected to the base and transparent electrodes are

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covered with elongatable insulating film and not overlapped with each other in Tanabe, as suggested by Lemarchand et al., in order to provide better flexibility.

Regarding Claims 25 and 39, Tanabe in view of Lemarchand et al. disclose the instant claimed invention except for the insulating film having a storage modulus, at molding temperature, which is larger than a storage modulus of the conductive members. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the insulating film having a storage modulus (elasticity), at molding temperature, which is larger than a storage modulus of the conductive members, since it has been held to be within the general skill of a worker in the art to select well known material on the basis of its suitability for the intended use as matter of obvious design choice. [In re Leshin, 125 USPQ 416].

Regarding Claims 26, 27, 40 and 41, Tanabe in view of Lemarchand et al. disclose the instant claimed invention except for the base electrode and conductive member containing organic polymer and conductive filler with a side length not more than $1/3$ of thickness of the conductive layer. Tanabe disclose the base electrode and conductive member containing organic polymer [Column 2, lines 44 – 48] and conductive filler [Column 4, lines 1 – 16], however does not specify that the side length of the conductive filler is not more than $1/3$ of thickness of the conductive layer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to select the conductive filler with a side length not more than $1/3$ of thickness of the conductive layer in Tanabe in view of Lemarchand et al., since it has been held

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that discovering an optimum value of result effective variable involves only routine skill in the art. [In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980)].

Regarding Claims 28, 30, 31 and 44, Tanabe discloses instant claimed invention except for a push projection. Lemarchand et al. disclose the push-button switch member having key-top body [4] with push projection [5] and transparent insulating film. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the push projection in Tanabe, as suggested by Lemarchand et al., in order to provide better connection between the moveable electrode [42] and the stationary contact [31, Column 3, lines 30 –44].

Response to Arguments

6. Applicant's arguments filed 06/17/2004 have been considered but are moot in view of the new ground(s) of rejection.
7. The drawing objection under 37CFR 1.83(a) and the Specification objections in the previous office action are withdrawn in view of Applicant's amendments.
8. Applicant argues that Tanabe does not teach "the transparent electrode comprises a transparent conductive polymer which is selected from the group consisting of a derivative of polypyrrole, a derivative of polythiophene and a derivative of polyaniline. Examiner respectfully disagrees. As indicated in rejection above Tanabe disclose a transparent electrode [4] that is formed from conductive polymer [polyethylene; Column 2, lines 44 – 58]. Examiner has cited

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Saito et al [US 6,595,653] reference, which in Column 2, lines 50 - 59 indicates that polyethylene is polythiophene species conductive polymer, therefore the limitation of the claim is satisfied and rejection is proper.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Saito et al. [US 6,595,663].

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marina Fishman whose telephone number is 571-272-1991. The examiner can normally be reached on 7-5 M-T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on 571-272-1990. The fax

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phone number for the organization where this application or proceeding is assigned is 703-872-9306.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marina Fishman
July 22, 2004

Tung Lu Ngunyen

PRIMARY EXAMINER

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